

**Appln No. 10/776,074
Amdt date May 24, 2005
Reply to Office action of February 24, 2005**

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1 - 4. These sheets, which include Figures 1 - 4, replace the original sheets including Figures 1 - 4.

Attachment: Replacement Sheets

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REMARKS/ARGUMENTS

In the Office action dated February 24, 2005, the Examiner objected to the drawings, rejected claims 1, 2, 4, 5, 8, 10 and 11 under 35 U.S.C. § 102 and rejected claims 12, 15, 16 and 19 - 21 under 35 U.S.C. § 103. Claims 3, 6, 7, 9, 13, 14, 17, 18, 22 and 23 were deemed allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

By this Amendment, Applicant has amended Figures 1 - 4. Reconsideration of the rejections and reexamination of this application are hereby requested.

Applicant's Response to the Objections to the Drawings

Applicant has amended Figures 1 - 4 to include a "prior art" legend as suggested by the Examiner.

Applicant respectfully traverses the objection to the drawings in paragraph 2 of the Office action. The disclosure teaches that a phase detector such as the one shown in Figure 5 may be incorporated into, for example, a delay lock loop or a phase lock loop. Thus, the phase detector of Figure 5 may, for example, be substituted for the phase detector 220 in Figure 2 or may be incorporated into a phase lock loop as shown, for example, in Figure 11. See, for example, respective discussions of these embodiments at page 12, lines 12 - 26 and page 16, lines 13 - 22. Also see the specification at page 9, lines 6 - 28. In view of these teachings, Applicant submits that the components and connections of claims 15 and 19 are thus clear

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from the disclosure as a whole and are adequately shown in the drawings.

Applicant's Response to the Section 102 Rejections

Claims 1, 2, 4, 5, 8, 10 and 11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Popescu, U.S. Patent Application No. 5,432,480 (referred to hereafter as "Popescu"). Claims 1, 8 and 10 are independent.

Figures 1 and 2 of Popescu disclose a conventional detector circuit where a higher speed signal CLK drives a clock input and a lower speed signal DIN drives a data input. Such a configuration is noted in Applicant's specification at page 10, line 35 through page 11, line 5. In contrast, claims 1, 8 and 10 relate in general to a circuit or method where a higher speed signal is coupled or provided to a data input and a lower speed signal is coupled to a clock input or used to clock a flip flop.

Claim 1 recites, in part:

a data input coupled to a first signal having a first frequency, and

a clock input coupled to a second signal having a second frequency, wherein the first frequency is a multiple of the second frequency.

Claim 8 recites, in part:

a high speed flip flop having a data input coupled to a first clock signal at a first clock frequency and a clock input coupled to a second clock signal at a second clock

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frequency wherein the first clock frequency is a multiple of the second clock frequency and wherein the high speed flip flop comprises a high speed latch and a low speed latch.

Claim 10 recites, in part:

providing a first signal, having a first frequency, to a data input of a first flip flop;
clocking the first flip flop using a second signal, having a second frequency, wherein the first frequency is a multiple of the second frequency.

In view of the above, Applicant submits that independent claims 1, 8 and 10 are not anticipated by Popescu. Claims 2, 4 and 5 that depend on claim 1 and claim 11 that depends on claim 10 also are patentable over Popescu for the reasons set forth above. In addition, these dependent claims are patentable over Popescu for the additional limitations that these claims contain.

Applicant's Response to the Section 103 Rejections

Claims 12, 15, 16 and 19 - 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim, U.S. Patent No. 6,388,485 (referred to hereafter as "Kim"), in view of Popescu. Claims 15 and 19 are independent. Claim 12 depends on claim 10.

The rejection of claim 12 is based on the Examiner's contention that all of the limitations of claim 10 are met by Popescu. However, as discussed above in conjunction with

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Applicant's response to the section 102 rejections, Popescu does teach or suggest the limitations of claim 10. Accordingly, the combination of Kim and Popescu does not teach or suggest all of the limitations of claim 12.

The rejection of independent claims 15 and 19 is based on the Examiner's contention that Popescu discloses the phase detector limitations of claims 15 and 19. As discussed above in conjunction with Applicant's response to the section 102 rejections, however, Popescu discloses a conventional detector circuit where a higher speed signal CLK drives a clock input and a lower speed signal DIN drives a data input. Thus, Popescu does teach or suggest a phase detector where a data input is coupled to a higher speed signal and a clock input is coupled to lower speed signal.

Claims 15 and 19 recite, in part:

a first flip flop comprising a data input coupled to a first signal having a first frequency, a clock input coupled to a second signal having a second frequency, wherein the first frequency is a multiple of the second frequency, and at least one output.

In view of the above, Applicant submits that independent claims 15 and 19 are not obvious in view of Kim and Popescu because the combination of Kim and Popescu does not teach or suggest all of the limitations of either claim 15 or claim 19. Claim 16 that depends on claim 15 and claims 20 - 21 that depend on claim 19 also are patentable over the cited references for

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the reasons set forth above. In addition, these dependent claims are patentable over the cited references for the additional limitations that these claims contain.

CONCLUSION

In view of the above amendment and remarks it is submitted that the claims are patentably distinct over the cited references and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested.

Respectfully submitted,
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